



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/679,240      | 10/03/2003  | Clifford R. King     | D/A0359Q            | 3537             |

25453 7590 01/10/2006

PATENT DOCUMENTATION CENTER  
XEROX CORPORATION  
100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR  
ROCHESTER, NY 14644

EXAMINER

MOORE, MARGARET G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1712

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/679,240

Applicant(s)

KING ET AL.

Examiner

Margaret G. Moore

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 to 94 is/are pending in the application.
- 4a) Of the above claim(s) 1 to 44 and 88 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45 to 62, 68 to 80, 84 to 87, 89 to 94 is/are rejected.
- 7) ☒ Claim(s) 63-67 and 81-83 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/3/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1712

1. Applicant's election with traverse of Group II in the reply filed on 12/21/05 is acknowledged. The traversal is on the ground(s) that the patent classification system has been developed for convenience, that separate classifications is not indicative of distinctiveness and that the groups should be examined together. This is not found persuasive because distinctiveness is clear for reasons other than classification, as the claims in the two separate groups are drawn to completely different inventions. In addition it would be an undue burden on the Examiner to examine both sets of claims simultaneously. Note that examination requires much more than simply searching or classifying.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 57 to 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how this spacer group is different from the R<sub>5</sub> group present in the claims. In lack of such a distinction this claim is confusing.

3. Claims 75 and 78 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. These claims contain limitations that are found in claim 45 and as such cannot be considered further limiting.

4. As an aside, the Examiner notes that the copending application cited on the bottom of page 3 of the IDS has, in fact, been considered. A line has been drawn through this citation because US patent applications are not considered to be prior art documents.

Art Unit: 1712

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 45 to 58, 60 to 62, 69 to 80, 84, 85 and 89 to 94 are rejected under 35 U.S.C. 102(b) as being anticipated by Blair et al.

Blair et al. teach a release agent composition that is used in an electrophotographic process. The release agent is solid, but has a melting point of about 35°C to 80°C (column 6, lines 51 to 53). See column 4, lines 15 and on, which details that that this material is applied to the hot fuser roll (i.e. an intermediate transfer medium) in molten form. The roll is then used in a printing process including steps (c) and (d) as claimed. See for instance the Background of the Invention which details the same indirect or transfer imaging process as claimed.

Particular attention is drawn to the top of column 5 which teaches silicone polymers having each of the monomeric formula shown in claim 45. Also note the polymers prepared in the working example. In this manner Blair et al. anticipate the requirements of claim 45. The polymer prepared in Example 2 has units meeting the requirements of claims 46 to 54. Note that the divalent ethylene in Example 2 meets the “y” units in claim 55 as well as the limitations of claims 56 to 58 and 60. For claim 61, the Si and O atoms in Examples 2 and 3 meet the required heteroatoms. For claim 62, note the propylene units in Example 3.

For claims 69 to 74 see column 5, lines 52 and 33. The specifically disclosed lower limit of about 5,000 anticipates these claims. For claims 75 to 80, the specifically disclosed values on column 6, lines 51 to 53, anticipate these claims.

For claims 84 and 85, see the bottom of column 6 through column 7 which teaches the addition of silica. For claim 89, note the silicone oil on the top of column 7 and the antioxidant on lines 25 and on.

For claim 94, see column 4, line 22. For claims 90 to 93, such properties will inherently be found in the process disclosed by Blair et al. since properties of silicones

Art Unit: 1712

having the same structure in the same process, such as the silicone polymer in the claimed process and that in Blair et al. cannot be separated.

7. Claims 45 to 53, 69 to 71, 75 to 80, 84, 85 and 89 to 94 are rejected under 35 U.S.C. 102(b) as being anticipated by Beach et al.

The teachings in Beach et al. are similar to those in Blair et al., with the exception that Beach et al. teach a different silicone polymer.

Beach et al. teach a release agent for electrophotographic processes in which a copolymer having a melting point of between about 45°C and about 80°C is applied to a fusing roll surface in an electrophotographic process. See for instance column 4, lines 15, through column 5, line 10. This shows a silicone polymer having the "x" and "z" units found in instant claim 45. Column 1, lines 17 and on, teaches that the toner image can be transferred to another support member during the printing process. This meets the requirements of steps (c) and (d) found in claim 45. In this manner claim 45 is anticipated by the teachings in Beach et al.

Note the specific siloxane polymer on column 4, lines 15 to 20, which meet the requirements of claims 46 to 53. Column 5, lines 53 and 54, meet claims 69 to 71 while the specifically disclosed lower melting point value of 45°C meets the requirements of claims 75 to 80. For claims 84 and 85, see column 6, line 27, which teaches the addition of silica. Column 6 also teaches the addition of an antioxidant and silicone oil meeting claim 89.

For claim 94, see column 5, line 14. For claims 90 to 93, such properties will inherently be found in the process disclosed by Beach et al. since properties of silicones having the same structure in the same process, such as the silicone polymer in the claimed process and that in Blair et al. cannot be separated.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1712

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair et al. or Beach et al.

Blair et al. and Beach et al. both fail to disclose a particle size range for the silica added thereto. Silica is added to the compositions to adjust the viscosity and as such the skilled artisan would have been motivated to adjust and/or modify the silica particle size in an effort to optimize the final siloxane polymer viscosity. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

10. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach et al.

Beach et al. teach a silicone polymer that embraces the silicone polymer (f) found in claim 68. See for instance that R on column 4 is defined as a C<sub>15</sub> – C<sub>60</sub> alkyl group, which embraces C<sub>18</sub> groups. In view of the range disclosed by Beach et al., one having ordinary skill in the art would have been motivated to select a C<sub>18</sub> hydrocarbon with a reasonable expectation of success. Selecting hydrocarbons within the range disclosed by the prior art is obvious.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 1712

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 45 to 58, 60 to 62, 69 to 80, 84 to 87 and 89 to 94 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 36 to 87 of copending Application No. 10/679,053 in view of Blair et al. This is a provisional obviousness-type double patenting rejection.

13. Claims 45 to 53, 68 to 71, 75 to 80, 84 to 87 and 89 to 94 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 36 to 87 of copending Application No. 10/679,053 in view of Beach et al.

This is a provisional obviousness-type double patenting rejection.

14. The claims in '053 are drawn to a printing process that has the same steps (a) to (d) as claimed. The only difference between these claims and the instant claims is that '053 is open to the application of any molten layer of intermediate transfer material. The claims fail to provide any suggestion of a silicone polymer meeting the required units in claim 45. The examiner notes that she cannot use the disclosure in '053 as prior art and thus this ODP rejection cannot be made over '053 alone.

However, as discussed above, both Beach et al. and Blair et al. teach useful silicone polymers meeting the claimed formula that can be used as a transfer material to be applied in a molten stage. These references detail various benefits attributed to such silicone polymers.

Thus one having ordinary skill in the art would have found the use of the silicone polymers disclosed by Blair et al. and Beach et al. in the printing process of '053 to have been obvious, in an effort to obtain the known benefits and properties associated with the molten silicone polymer transfer material. In this manner the claims are rendered obvious.

Art Unit: 1712

15. Claims 63 to 67 and 81 to 83 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For claims 63 to 67, the prior art fails to teach or suggest a silicone polymer having spacer groups as claimed. For claim 81, none of these specific silicone polymers are taught by the prior art. For claims 82 and 83, both references fail to teach or suggest a reactive material that can be crosslinked. In fact both references appear to teach away from such an addition (see e.g. Blair et al. col. 7, line 15).

16. Claim 59 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest a substituted spacer group as claimed. Please note that "substituted" distinguishes itself from heteroatom, as the former must be attached to a hydrocarbon backbone.


17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
1/4/06